

Reliability on ISS Talk Outline

1. Overview of ISS
2. Space Environment and its effects
 - a. Radiation
 - b. Microgravity
3. How we ensure reliability
 - a. Requirements
 - b. Component Selection
 - i. Note: I plan to stay away from talk about Rad Hardened components and talk about why we use older processors because they are less susceptible to SEUs.
 - c. Testing
 - d. Redundancy / Failure Tolerance
 - e. Sparing strategies
4. Operational Examples
 - a. Multiple MDM Failures on 6A due to hard drive failure

In general, my plan is to only talk about data that is currently available via normal internet sources to ensure that I stay away from any topics that would be Export Controlled, ITAR, or NDA-controlled. The operational example has been well-reported on in the media and those are the details that I plan to cover. Additionally I am not planning on using any slides or showing any photos during the talk.